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THE STATUS OF PRAIRIE DOGS IN THE GREAT PLAINS

by

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The data used in this report was acquired during an investigation conducted for the Development Planning and Research Associates Incorporated located here in Manhattan, Kansas: This is a private consulting firm. Their permission to use this information is greatly appreciated.

There are four species of prairie dogs in the United States. These are the black-tailed prairie dog (Cynomys ludovicianus), white-tailed prairie dog (Cynomys leucurus), Utah prairie dog (Cynomys parvidens) and Gunnison's prairie dog (Cynomys gunnisoni) (Jones et al, 1975). Their ranges are shown in Figures 1 through 4.

The black-tailed prairie dog is the most abundant and occurs in the fertile mixed and short-grass prairie areas of the Great Plains. This prairie dog lives in well-defined colonies which can become quite large (Hall and Kelson, 1959). This is the only prairie dog that does not truly hibernate. This species of prairie dog is the one most often in serious conflict with producers of livestock.

The white-tailed prairie dog has a relative limited range. It inhabits arid lands at elevations up to 10,000 feet. Colonies of white-tailed prairie dogs are smaller and more diffuse than those of black-tailed prairie dogs. The white-tail is considered to be a hibernator (Lechlietner, 1969).

The Utah prairie dog is similar in habits to the white-tailed prairie dog and is very limited in its distribution (Sparks, 1973). This species is classed as endangered by the Secretary of the Interior, because of its low numbers and diminishing range (Sparks, 1973).

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*Presented at the Great Plains Wildlife Damage Control Workshop, Manhattan, Kansas, December 4 thru 6, 1979.

In 1961, 1965, 1968 and 1972 estimates were made by the U.S. Fish and Wildlife Service as to the status of prairie dogs during those years when 1,715,000 - 1,668,000 - 1,621,000 and 1,574,000 acres of prairie dogs were thought to occur in the Great Plains area of the United States (Berryman and Johnson, 1973)

In 1973 a prairie dog and black-footed ferret workshop was held in Rapid City, South Dakota. A proceedings of that meeting listed an estimate of the number of acres of prairie dogs thought to exist at that time.' These estimates are shown on the following slides or can be found in Table 1 of this report.

In May and June of 1979 phone calls were made to most of the same people who estimated the acreages of prairie dogs in 1973. In some cases we were referred to other people who now had a better idea of the status of prairie dogs in a particular state in question.

The estimates we placed in this report were what we believed to be the best estimates we could find. Some of the estimates were based on guess, others had some field data to back up the figures given. However, when all the information was tabulated, the results seemed reasonable,

The estimates for 1979 are as shown in these next slides or in Table 1 in this report. We separated out the black-tailed prairie dogs for our 1979 report because this species is the most numerous and the kind most often discussed by rangeland management people. These estimates are shown in these slides or Table 1.

From these estimates and the reports from field biologists who work in areas inhabited by prairie dogs it seems safe to assume that in recent years prairie dogs have increased in many states in the Great Plains. Even on protected areas where control was not conducted (such as Charles Russell Wildlife Refuge in Montana, Wind Cave National Park and the Badlands National Park in South Dakota) prairie dogs are reported to have increased in recent years.

SOME CLOSING THOUGHTS

The outlook for prairie dogs on private land in my opinion is not good, even though we find prairie dogs are now increasing. The decline in their population in the last 100 years has been close to 90%, and the attitude of the private landowner has not changed. Because of the fact that prairie dogs wander from public land onto private land, recent calls for extermination of all prairie dogs on private and public lands, even on National Parks, is increasing

We should encourage good rangeland management and not merely prairie dog control alone. Over-abundance of prairie dogs, in many cases, is a sign of poor rangeland management. We perpetuate poor rangeland management by advocating killing prairie dogs only.

Prairie dog damage control is a necessary factor and reducing prairie dogs is a part of the picture, but in my opinion we should encourage range recovery programs following prairie dog reduction.

Of the three poisons used in prairie dog control, I believe all three are equally effective if properly used following pre-baiting. Zinc phosphide presents the least hazards and should be the first line product to be used. The use of all grain baits should be used only between September and December. The old recommendation of late winter and spring use of grain baits prevents success and fosters negative attitudes toward the effectiveness of the poison used, when actually the reason for lack of success is due to the unsettled habits of the prairie dogs.

Grain baits are not near as hazardous to ferrets as is the use of fumigants, and grain baits are much less expensive and cost less to apply than fumigants. As stated before, I believe that the lack of pre-baiting with grain baits reduces its effectiveness, regardless of the poison used (even 1080). It is not uncommon for sales within one state to amount to 100,000 pounds of grain bait to control 30,000 acres of prairie dogs. This goes on year after year regardless of the fact that one pound per acre is a generous amount per application.

Wildlifers sometimes foster confusion on the part of school teachers and the general public by stating the black-tailed prairie dog is endangered (Matthiessen, 1959) and by all out efforts to halt reduction of prairie dogs because of black-footed ferrets.

With the rangeland in poor condition, therefore very suitable for prairie dogs and with a possible expansion range of one-third increase per year among prairie dog populations, it does riot take long for prairie dogs to increase and spread. Sooner or later prairie dogs will have to be killed. Fewer days of poison exposure would result if the population was kept in check.

When prairie dogs get out of control, then people use whatever poison they can obtain including fumigants and anti-coagulants; these baits present great hazards to ferrets. Proof of this lies, I believe, in the fact that grain baits have been relied upon almost entirely in the northern states of the Great Plains and fumigants have been either relied upon entirely

or been part of most control efforts. I believe the only place black-footed ferrets are living on earth today is in the northern part of the Great Plains, and I believe their absence in the southern Great Plains could be directly responsible to the use of fumigants.

If we continue to attack the prairie dog alone and do not develop an attitude toward a land ethic, then I believe it becomes a question of who can out last who, the prairie dog, coyote or mankind. And several sheepmen have already placed their bets.

Table. I

Estimated U.S. Prairie Dog Infestation in Acres

State	Estimated Acres of Infestation 1973	1979	Black-tailed Prairie Dog 1979
N. Dakota	8,000 2/	11,000 14/	11,000
S. Dakota	60,000 3/	300,000 15/	300,000
Nebraska	15,000 4/	55,500 16/	55,500
Kansas	36,000 5/	60,000 17/	60,000
Oklahoma	15,000 6/	20,000 18/	20,000
Texas . .	77,500 7/	'90,000 19/	90,000
New Mexico	248,000 8/	300,000 20/	200,000
Arizona	2,000 9/	5,000 21/	---
Colorado	417,000 10/	500,000 22/	100,000
Montana,	132,000 ii/	150,000 23/	70,000
Wyoming	178,500 12/	300,000 24/	200,000
Utah	68,030 13/	190,000 25/	---
TOTAL	1,257,000	1,981,500	1,106,500

1961	1965	1968
1,715,000 1/	1,668,000 1/	1,621,000 1/

1971
1,574,000 1/

1/ Berryman and Johnson, 1973
2/ Grondahl, 1973
3/ Rose, 1973
4/ Lock, 1973
5/ Henderson and Little, 1973
6/ Lewis and Hassien, 1973
7/ Cheatheam, 1973
8/ Stuart and Christensen, 1973
9/ Henderson, 1979 est.
10/ Torres, 1973
11/ Henderson, 1979 est.
12/ Clark, 1973
13/ Sparks, 1973
14/ Pfiefer, 1979
15/ Hillman & Henderson, 1979
16/ Kelley and Lock, 1979
17/ Henderson, 1979
18/ Meyer, 1979
19/ Caroline, 1979
20/ Garcia, 1979
21/ Edstrom, 1979
22/ Bisell and Henderson, 1979
23/ Seyler and Henderson, 1979
24/ Crosby, 1979
25/ Reynolds, 1979

Figure -3. Range of *the White-Tailed Prairie Dog*

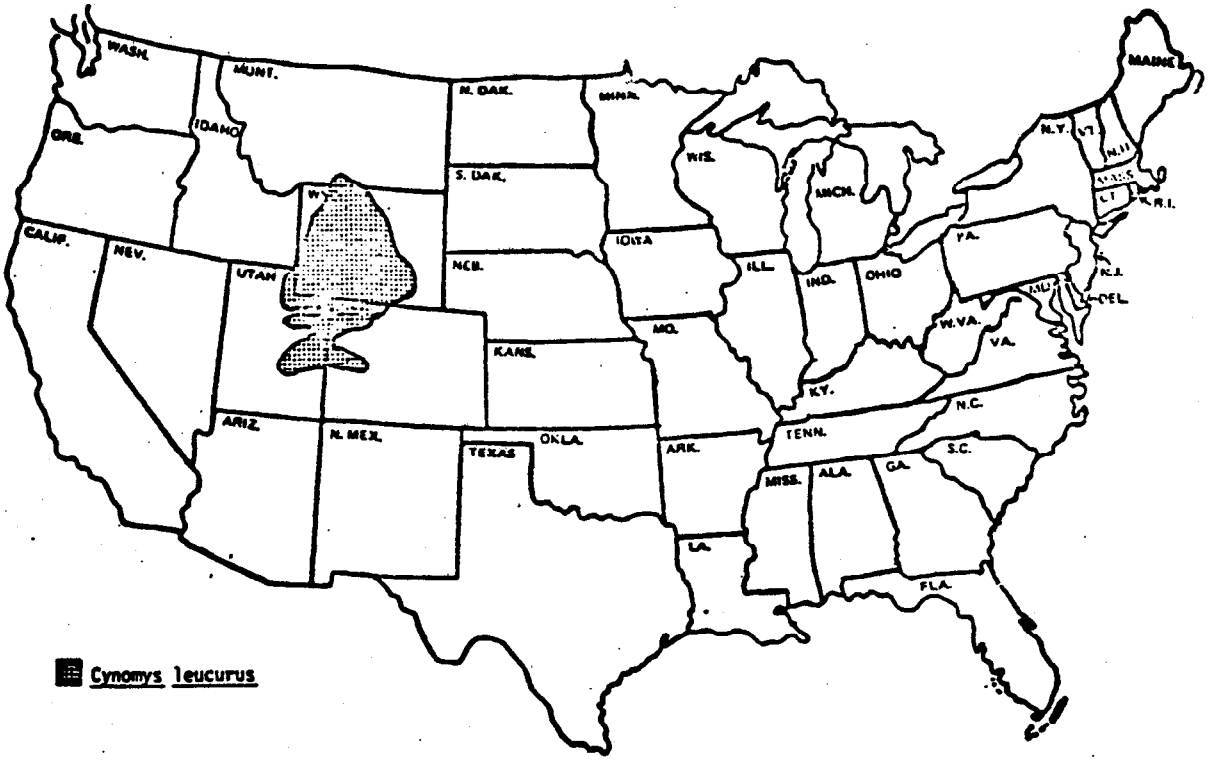


Figure . -4. *Range of the* Utah *Prairie Dog*

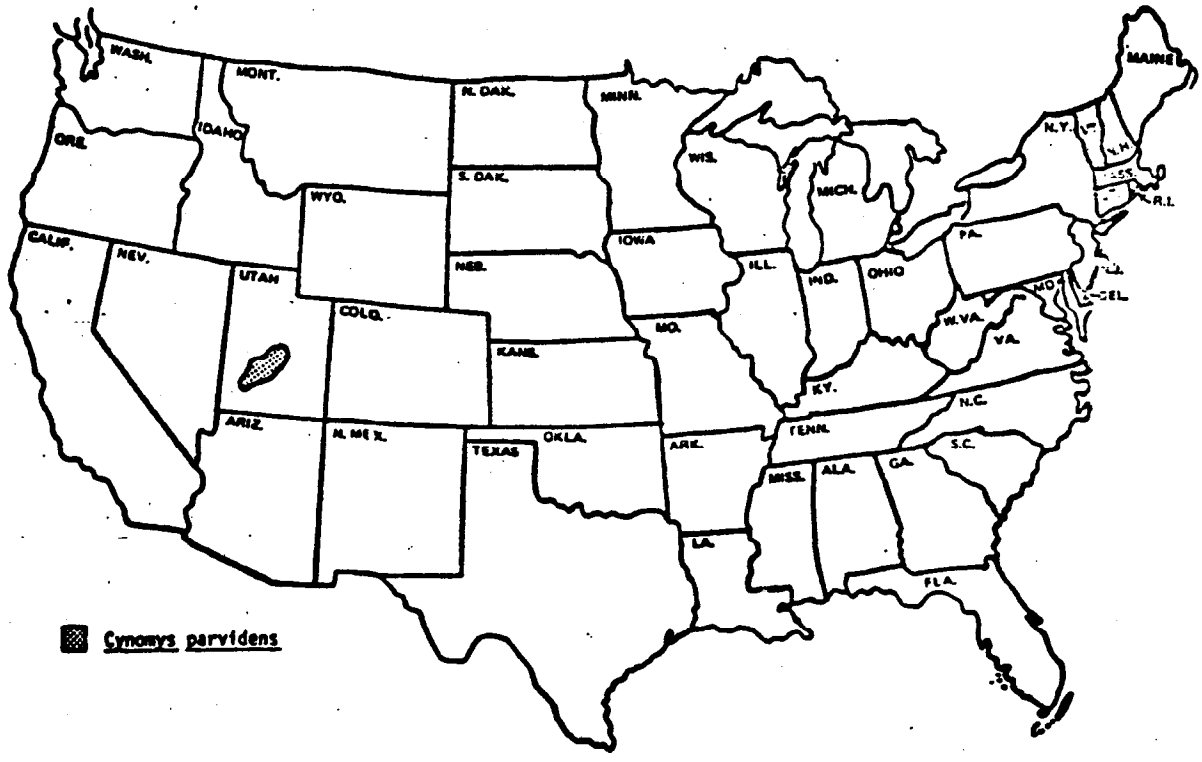


Figure -1. **Range of** the Black-Tailed **Prairie** Dog

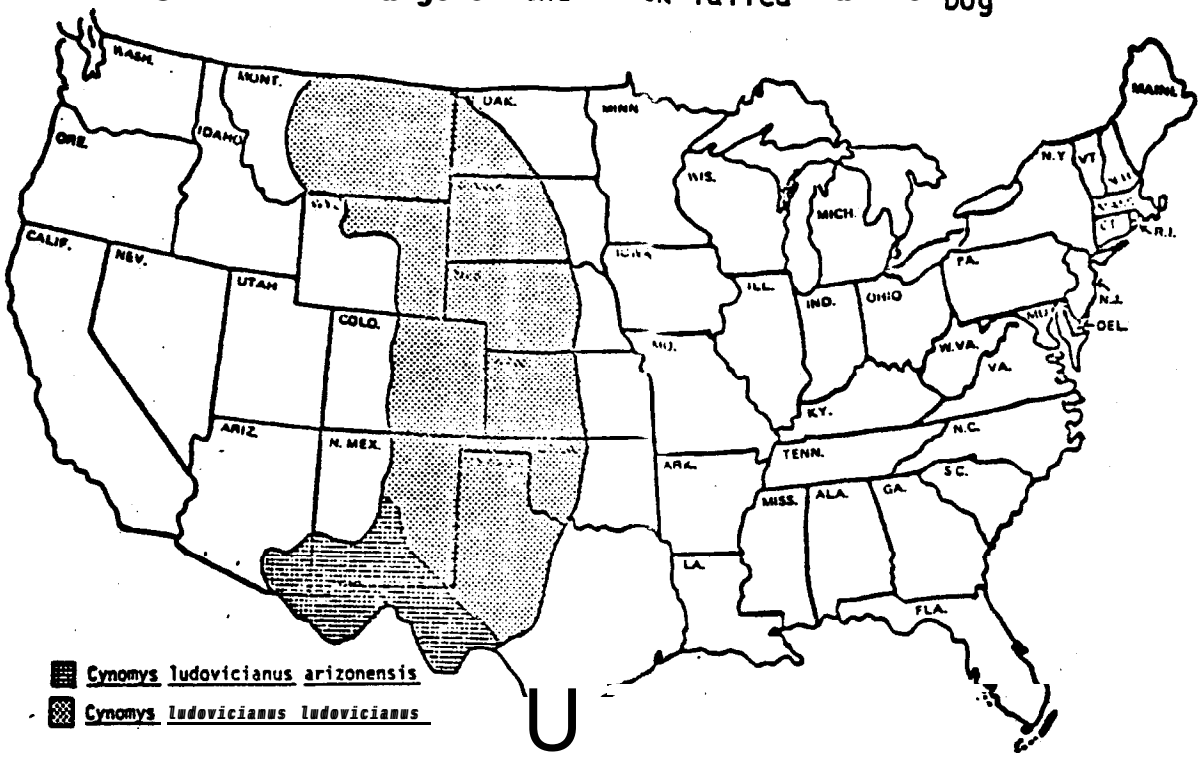
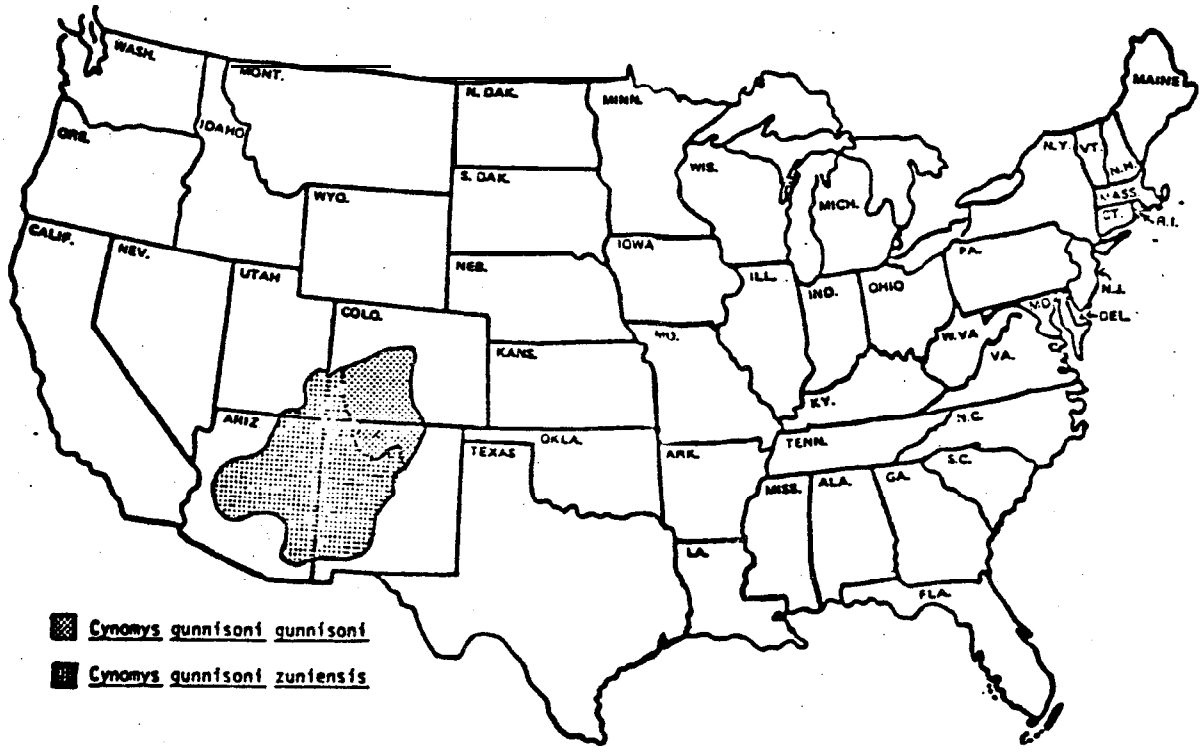


Figure. -2. Range **of** the Gunnison **Prairie Dog**



Questions:

Those in attendance at the meeting may recall a question by Ron Klataske, a field representative of the National Audubon Society, who questioned the reliability of these estimates of prairie dog populations. In brief, I answered that these estimates are just that "estimates." In order to get accurate data it would cost a great deal of money. I stated that I felt good with these estimates and that the people who made the estimates were among the best informed regarding these matters. Conrad Hillman and I estimated 300,000 acres of prairie dogs in South Dakota in 1979. In a petition to the EPA to obtain 1080 for prairie dog control in South Dakota a South Dakota Agricultural Department representative estimated one million acres of prairie dogs in South Dakota that year.

Hillman's and my estimates were based on past estimates, probable growth since those estimates were made, and his knowledge gained in ferret surveys. If any question is posed, I still would believe that 300,000 is high but a lot closer to the truth than is one million. More substantial data has since been given to me and is taken from reports of federal agencies. In late November, 1979, estimates of acres of prairie dogs on land controlled by the agencies in South Dakota were: National Forest Service - 10,000 acres; National Park Service - 2,000 acres; Bureau of Land Management - 2,000 or less; Bureau of Indian Affairs - 130,000 acres.

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